User's Guide

Beijer ELECTRONICS

Information Designer User's Guide

Preface

Information Designer is a software application for the configuration of CIMREX and EXTER operator terminals. Information Designer helps you create logical, flexible, and effective HMI applications that provide the right information on the right occasion to operators and other systems. This manual is based on an example project that the user completes step by step.

Information Designer also includes a Reference Manual (MA00749).

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All examples in this manual are only intended to improve understanding of the functionality and use of the software. Beijer Electronics AB cannot assume any liability if these examples are used in actual applications.

In view of the wide range of applications for this software, users must acquire sufficient knowledge themselves in order to ensure that the software is correctly used in their specific application.

Beijer Electronics AB will accept no liability for any damage incurred during the installation or use of this software.

Beijer Electronics AB prohibits all modification of the software.

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1 Introduction

The Information Designer configuration tool is a software package for the development of projects for the CIMREX and EXTER operator terminals. The HMI system is supplied with all the basic functions you could possibly need for your application. The functions are well tested and have been developed with customer needs and preferences in focus.

The configuration tool can be used to easily create a complete process image with the aid of pre-defined objects. In this way, it is easy to gain an overview of a complex application. Users can also customize the pre-defined objects or create their own.

Communication drivers for most controllers and automation equipment on the market are available.

1.1 Manual Structure

This manual is based on examples, which makes it easy to get started with program development with Information Designer. The idea behind the manual is that the reader follows the instructions from the start to finally produce a functioning project that can be further developed or used for ideas. The examples are shown in an operator terminal with touch display.

It is assumed that the user has good knowledge of Windows and access to documentation for the Windows 2000/XP operating system. For information about the use of the configuration tool, refer to the help files (press **F1**) and the Reference Manual for EXTER.

2 Installing and Starting the Program

For ease of use, we recommend using a mouse with the configuration tool. For keyboard commands, refer to the manual for Windows 2000/XP Professional.

The help text for the current function in the program is obtained by pressing the **F1** key.

2.1 System Requirements

Hardware and Software	Recommended
Operating System	Windows 2000 Professional Windows XP Professional
Processor	Pentium II, 266 MHz
RAM	64 MB
Free space on hard drive	100 MB
Installed software	Internet Explorer 5.0 or later

The configuration tool ought to be used on a color monitor with more than 256 colors.

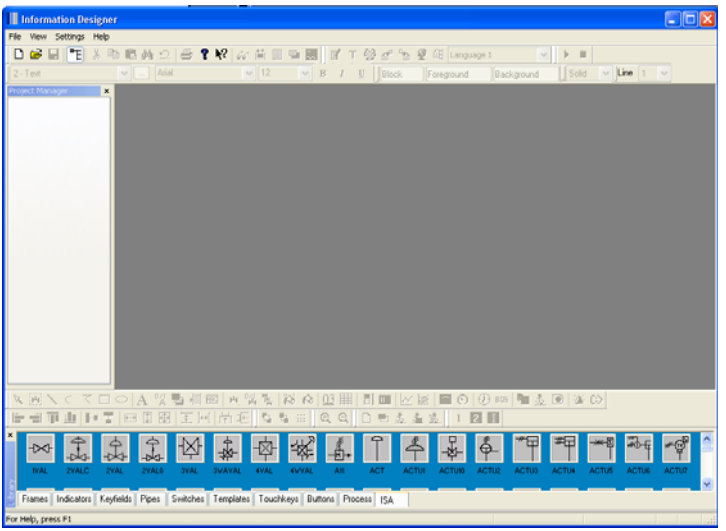
2.2 Installing the Configuration Tool

The configuration tool is supplied on a CD. The manuals can also be read from the CD.

The installation creates an icon for the configuration tool in the Information Designer program group.

2.3 Starting the Configuration Tool

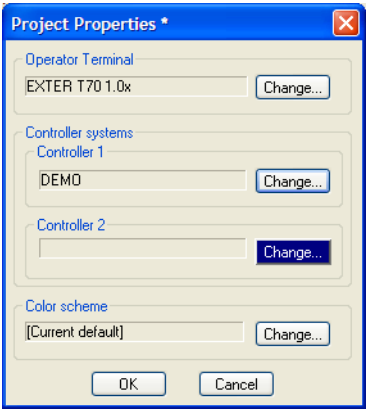
Once the configuration tool is installed, you can start it by selecting Information Designer under **Start/All Programs/Information Designer**. The first time the configuration tool is started, the Project Manager is shown together with certain toolbars.


Information Designer
File View Settings Help
Project Manager
Frames Indicators Keyfields Pipes Switches Templates Touchkeys Buttons Process ISA
For Help, press F1

3 Creating a New Project

3.1 Select File/New...

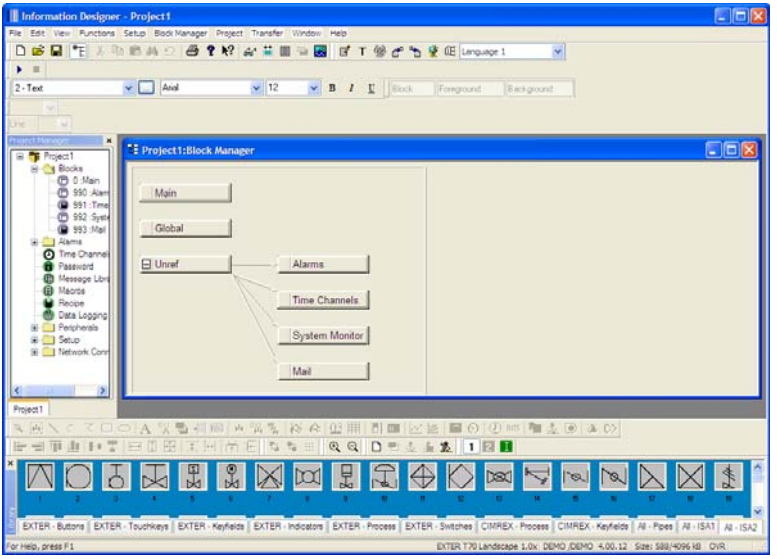
Select **File/New...** to create a new project. Select **Operator Terminal** and **Controller systems**. Click **OK**. The project is named the first time it is saved.



When a new project is created, a tree structure for the project (Project Manager), various menus, toolbars, and object palettes are shown.

3.2 Open the Block Manager

In the manual, we will use the block manager as the starting point when creating our project. Select **View/Block Manager** to activate the block manager.



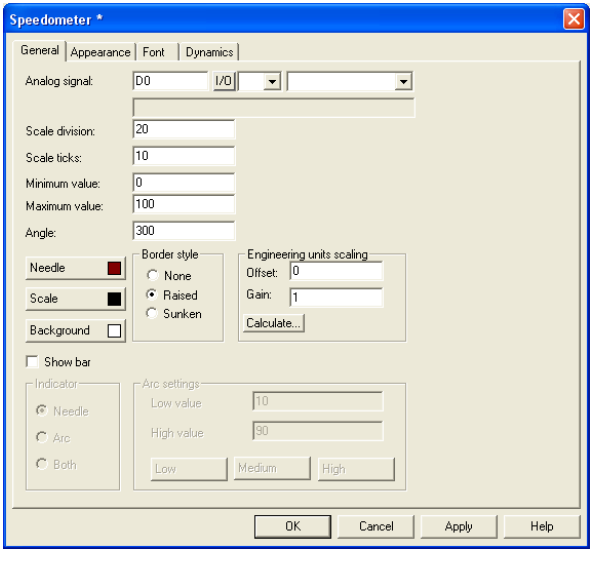
3.3 Save the Project

Save the project by clicking the diskette symbol or select **File/Save as...**. Specify a name for the project and the save destination. In this case, name the project User_guide. Finish by clicking **Save**.

3.4 Add Object

1. Double-click **Main** in the block manager. The main block is opened.

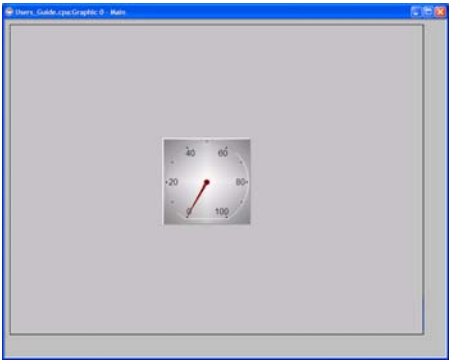
2. Select the **Speedometer** object in the object palette and click in the block. The properties dialog for the object now opens.



3. Type **D0** in the **Analog signal** field on the **General** tab.

4. Click **OK**.

The object is now shown in the block. Drag the handles to resize and position the object as desired.



When, for example, adding objects or drawing graphics in the work area, the **Undo** function in the **Edit** menu can be used (10 steps). The keyboard shortcut **Ctrl+Z** can also be used.

5. Now add a slider by selecting the **Slider** object in the object palette and click in the block.
6. Type **D0** in the **Analog signal** field on the **General** tab.

Note:
On the **Access** tab, the **Enable operator input** function must be checked in order to be able to maneuver the object.

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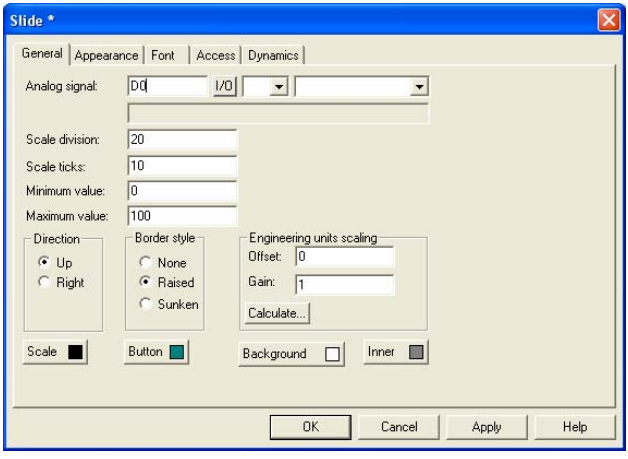
7. Click **OK**.


Slide *
General
Appearance
Font
Access
Dynamics
Analog signal:
D0
I/O
Scale division:
20
Scale ticks:
10
Minimum value:
0
Maximum value:
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Direction
Up
Right
Border style
None
Raised
Sunken
Engineering units scaling
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Calculate...
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OK
Cancel
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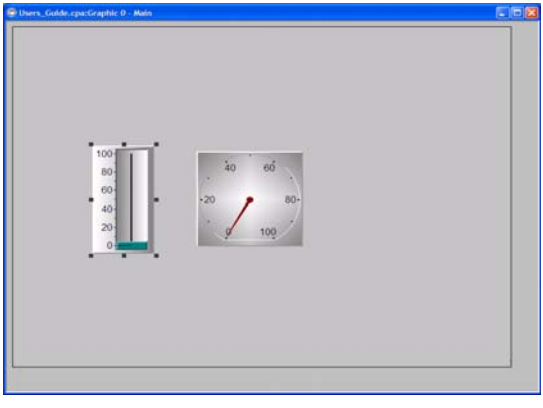
Help


100
80
60
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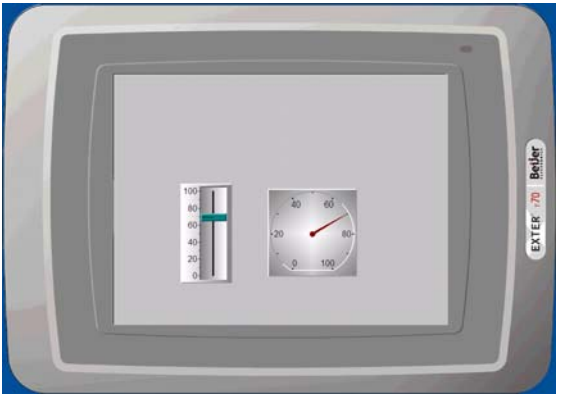
100

4 Starting the Simulator

The Simulator is used to test run the project on a personal computer. Save the project and click the Play button or select **Project/Run**. Now, a new window is shown, acting as the operator terminal.

You can now drag the slider to see how the speedometer changes.



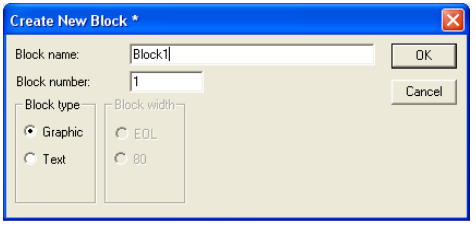
Press **Esc** to end the simulator and return to the configuration tool.

5 Creating Jumps between Blocks

This chapter describes how to create jumps between the different blocks in the project.

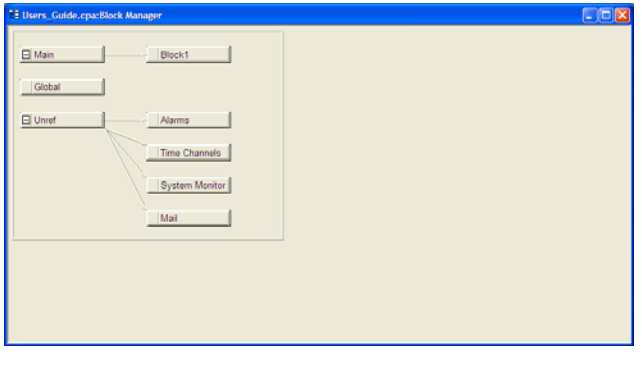
5.1 Add a Block

1. Right-click in the block manager and select **New Block**. Type a name for the block, in this case Block1, and click **OK**. The block is now opened.



2. Press and hold the left mouse button with the pointer located in the main block in the block manager and drag an arrow to Block1. A jump is now created to the new block.

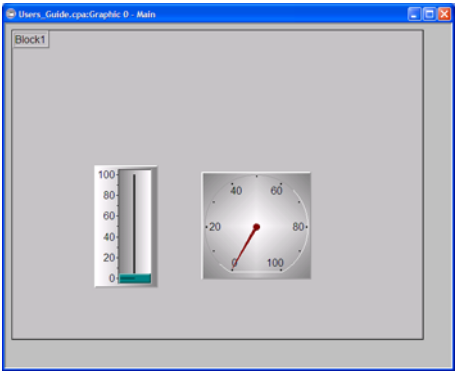
Block1 is now found in the block manager, as shown.



5.2 Open the Main Block

3. Double-click the main block in the block manager.

A button has now been automatically created for a jump to Block1.



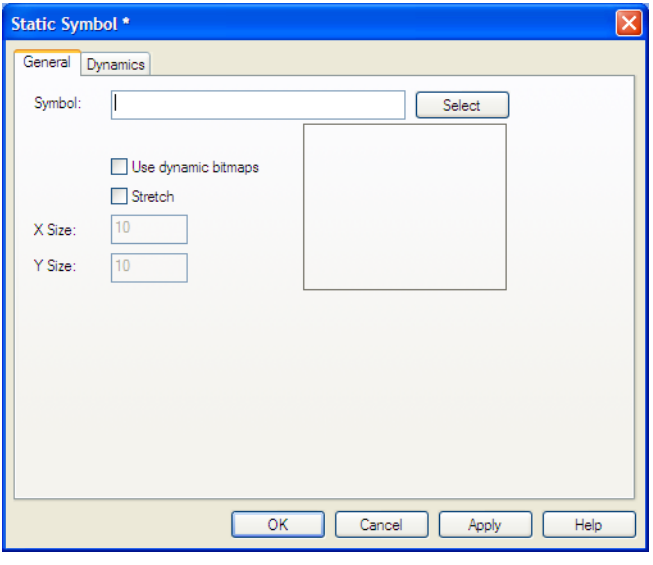
5.3 Create a Jump back to the Main Block

Create a jump back to the main block by dragging an arrow from Block1 to the main block in the block manager. A button is now created in Block1 to implement the jump to the main block.

6 Importing Symbols

In this chapter we will add a symbol to Block1.

1. Double-click on Block1 in the Block Manager.
2. Select **Symbol** in the object palette and click the block. The Static Symbol dialog opens.



3. Click **Select**. The **Select Symbol** dialog opens.
4. Click **Browse...**.
5. Find and select the desired symbol, in this example Static Symbol2.bmp.

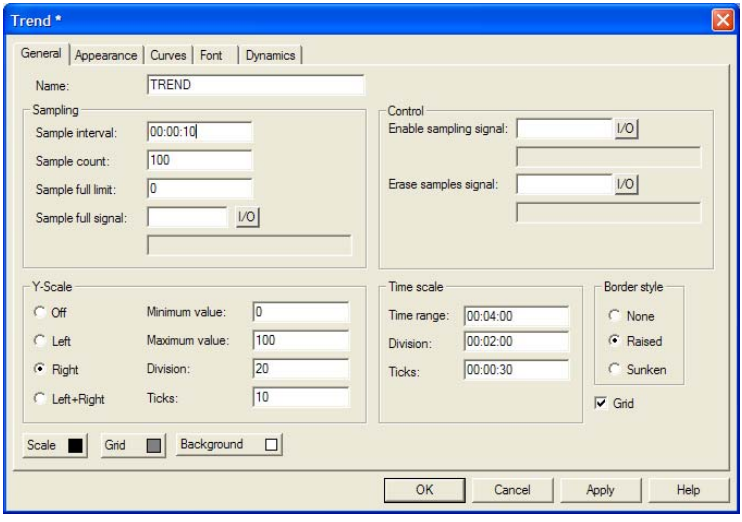
6. Click **OK**.

The Digital symbol and Multisymbol objects are added in the same way.

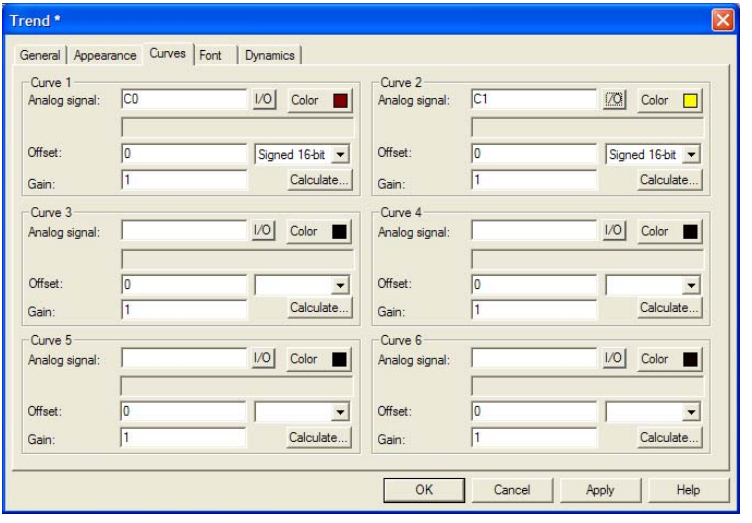
7 Adding a Trend Object

The trend function is used to store register information from the controller in the operator terminal. We shall now add a trend object with two curves.

1. Create a new block and name it Block2.
2. Select the **Trend** object in the object palette and click in the block. The trend dialog now opens.



3. Type a name for the trend file, in this example TREND, and select the Curves tab. Make the settings as shown in the figure.



4. Click **OK**.
5. Drag to resize and position the object as desired.

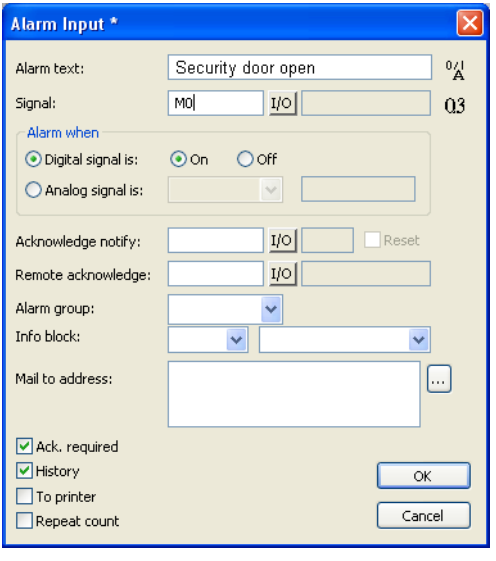
7.1 Test run the Project

Save the project and click the Play button ▶ to test run the project.

8 Alarm Management

We shall now create a function to generate an alarm.

1. Select **Functions/Alarms...**. The **Alarms** dialog now opens. Click **New Alarm** and make the settings as shown in the figure.



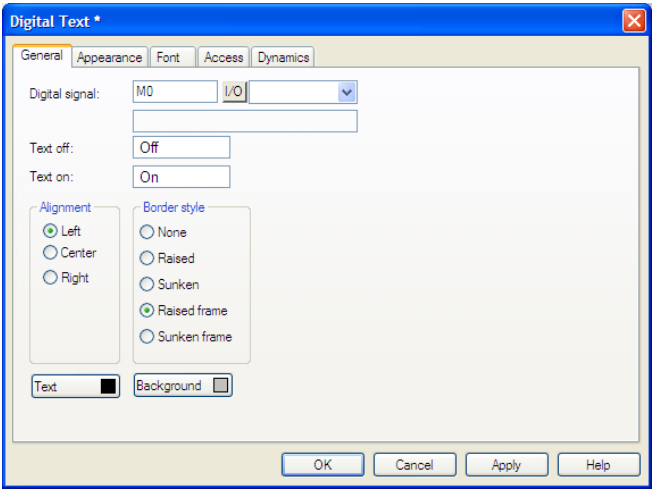
2. Type the alarm text **Security door open**. This text will be shown in the alarm list.
3. Specify **M0** as the signal to generate the alarm.
4. Click **OK**.
5. End **Alarms** using **Exit**.

8.1 Create a Jump to the Alarm Block

The alarm block is a so-called system block that already exists. Create a jump to the alarm block by dragging an arrow in the block manager from the main block to the alarm block.

8.2 Create an Object to Activate the Alarm

In the main block, we add a digital text object that will activate the alarm. Select the object in the object palette and click in the main block. Make the settings in the dialog as shown in the figure.



Note:
In order to be able to maneuver the object, the **Enable operator input** function on the **Access** tab must be checked.

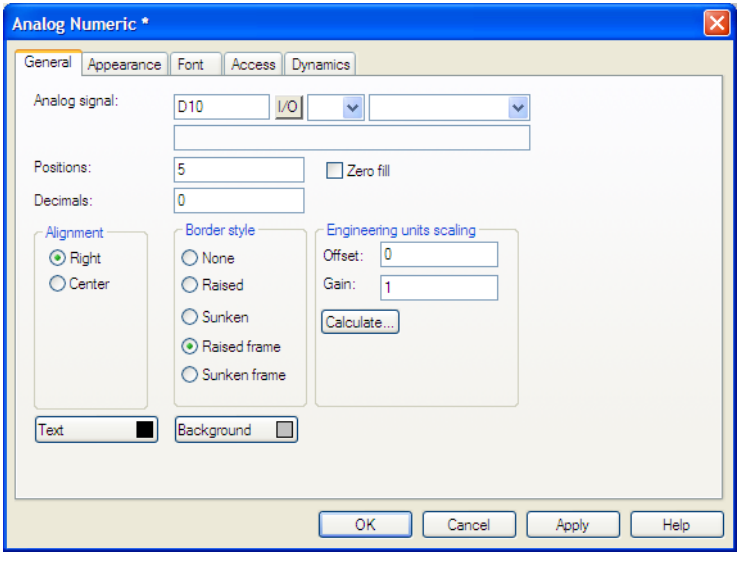
8.3 Test run the Project

Save the project and click the Play button to test run the project.

9 Create a Recipe Block

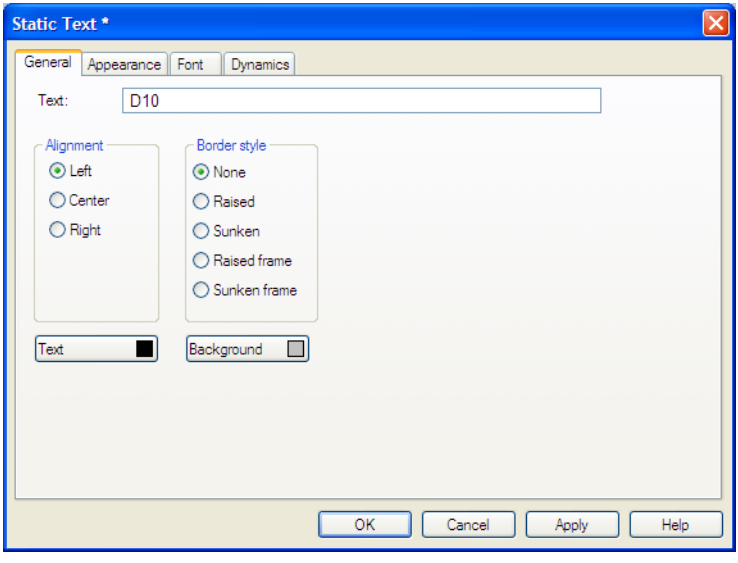
This function is used to save the signal value from the controller in the block in question.

1. Add a new block and name it Recipe.
2. Add an analog numerical object and make the settings as shown in the figure.



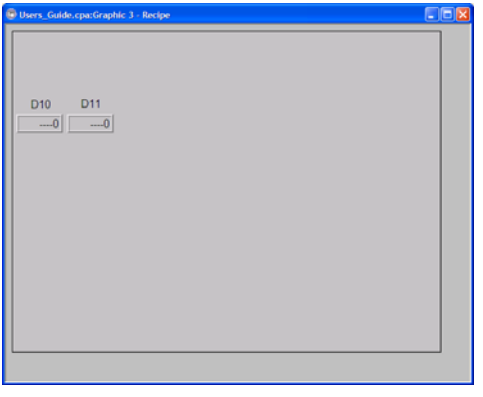
Note:
Do not forget to activate **Enable operator input** on the **Access** tab.

3. Add a static text object and type D10 as the text in the block.



9.1 Copy Object

4. Select the objects by dragging a frame around them and press **Ctrl C**. Then press **Ctrl V** in order to paste a copy. Move the copy so that they are lined up.
5. Edit the new object by double-clicking it. Change the signal to D11 in both the static text and the analog numerical object.



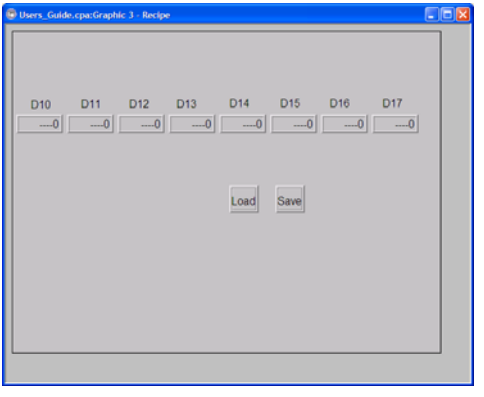
9.2 Create a Series

6. Select the analog numerical objects and select **Object/Create Series**.
7. Specify the number of columns as 6.
8. Finish with **OK**. A series is now created of the relation between the two objects first created.
9. You can copy/paste static text objects for the text above the Analog Numeric Objects.

9.3 Create Functions to Load and Save Recipes

10. Add a touch key by selecting in the object palette and clicking in the block.
11. The dialog for the key now opens. Select **Load recipe** under **Other functions** in the dialog and type the text **Load** on the **Text** tab.
12. Finish by clicking **OK**.

13. Make another key for **Save** recipe.



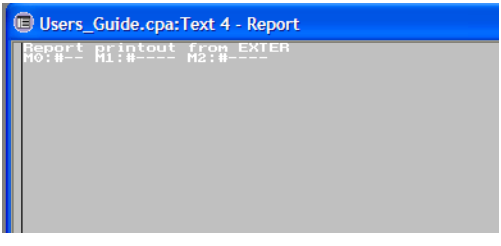
During operation, when you select **Save** a keyboard is shown in order to type the name of the recipe file.

14. Finish by clicking **OK**.

10 Report Printout

In this chapter we will shall create a report printout to be printed on a connected printer.

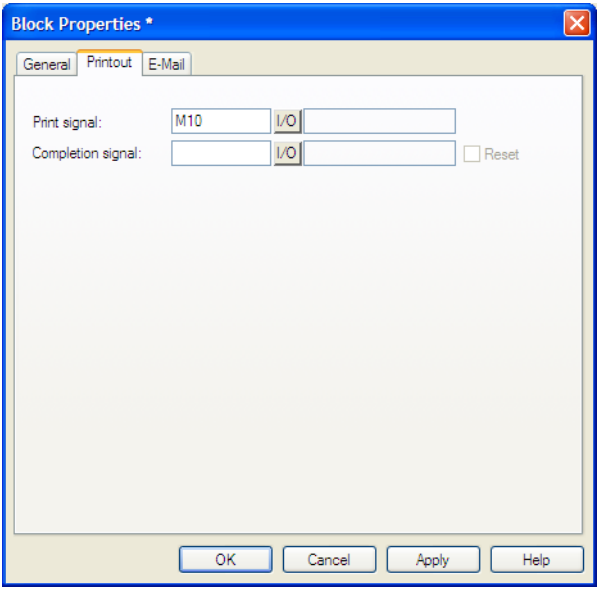
1. Create a new block of the Text type and name it Report.
2. Type the desired report text. For example: Report Printout from EXTER.
3. Add a digital object by selecting a digital text object in the object palette and clicking in the block.
4. Connect it to the M0 signal.
5. Similarly, add an analog numerical object and connect it to the M1 signal.



6. Close the block.

10.1 Print the Report Block

Right-click the report block in the block manager and select **Properties**. The properties dialog for the block now opens. Specify the **M10** signal as **Print signal** on the **Printout** tab. When M10 is activated, the report will be printed on the connected printer.

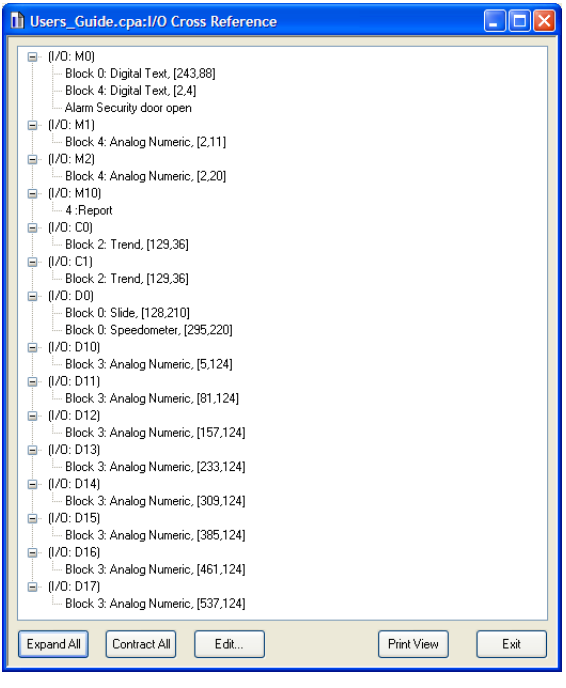


11 I/O Cross Reference

The I/O Cross Reference function is used to show which signals are used in the project.

1. Select **View/IO Cross Reference**.
2. You can specify the start and end signals, for example, **D0** to **D99**. If no interval is specified, all I/O signals in use are shown.

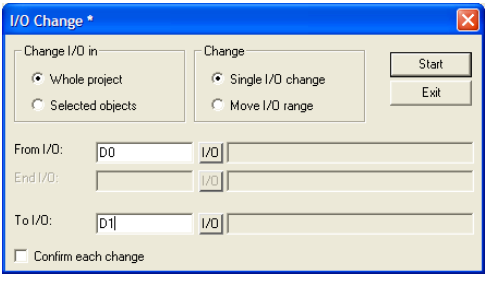
The list that is shown describes the signals with blocks, objects, and pixel positions. No interval is specified for the list below.



12 I/O Change

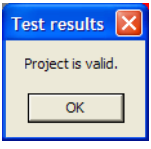
In this chapter we describe how you can easily change a signal throughout the entire project. We shall change D0 to D1.

1. Select **Edit/I/O Change**.
2. Type **D0** under **From I/O** and **D1** under **To I/O**.
3. Click **Start** to implement the change.



13 Test the Project

We shall now test the project. Select **Project/Test**.



If you want to test run the project this can be done in the simulator.

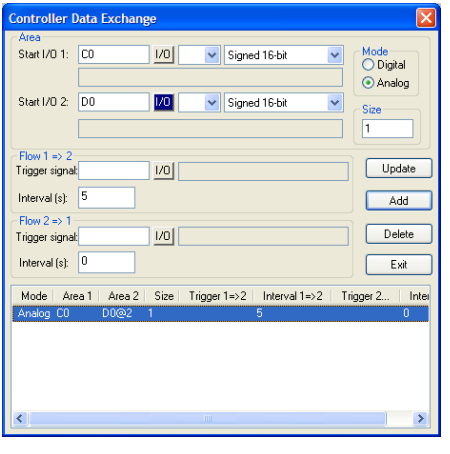
14 Dual Drivers

It is possible to use two different drivers in the operator terminal, which means that the operator terminal can communicate with two different controllers simultaneously.

1. Select **Project/Properties/Controller 2**. In the dialog that opens, select **Demo**. Finish with **OK**.
2. Create a new block and name it Dual Drivers.
3. Make a jump from the main block to Dual Drivers.
4. Add an analog numerical object and connect it to C0.
5. Add a speedometer and connect it to D0@2 (controller 2)

14.1 Data Exchange between Controllers

1. Select **Functions/Data exchange**.
2. Make the following settings.



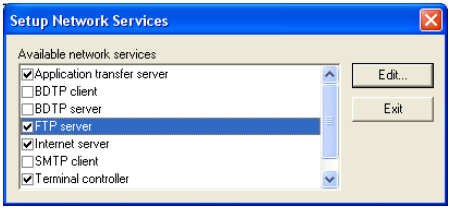
15 The Operator Terminal as an FTP Server

FTP (File Transport Protocol) is a standard Internet protocol. When the operator terminal works as an FTP server it is possible to upload/download files to/from the operator terminal (e.g. recipe files). An FTP client is required in order to upload/download files. CIMREX Tools, Internet Explorer, Windows Commander, or some other standard FTP program can be used as the FTP client.

The FTP server in the operator terminal only allows transfers in passive mode. The operator terminal does not utilize the date stamps on files. The date shown in the FTP client shall therefore be ignored. Language-specific characters are not supported in file names. The files in the different libraries in the operator terminal allocate memory from the project memory. Information on the available project memory is included in the file info.txt.

15.1 Activate FTP Server

1. Select **Setup/Network/Services**.
2. Select **FTP Server**.
3. Click **Exit**.



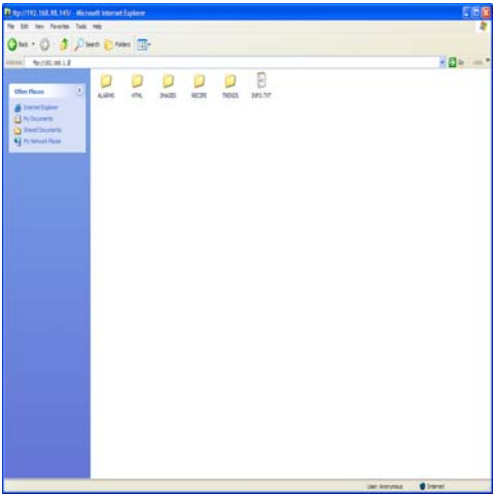


Fig: 1 The file structure in the operator terminal.

Beijer Electronics HMI Products is a pioneer in connecting people with the processes they control. Our HMI solutions build on 25 years of automation knowledge, yet they handle industrial applications with everyday ease. Used with simple intuition, they set machines, information and ideas in motion.

HMI Products is part of the Beijer Electronics group, which is listed on the Stockholm Stock Exchange and based in Malmö, Sweden. The group has subsidiaries in 10 countires in Asia, Erope and North America, as well as close relationships with OEMs, brand-label partners and distribution partners worldwide.

For the representative nearest you, visit ***www.beijerelectronics.com.***

FROM PERSON TO PROCESS.

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